

## **REMARKS**

The Office Action dated January 3, 2007, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-69 are currently pending in the application, of which claims 1, 13, 22, 34, 46, and 58 are independent claims. Claims 13-21 were allowed. Claims 1-12 and 22-69 are respectfully submitted for consideration.

As noted above, claims 13-21 were allowed. Additionally, claims 4, 7, 11-12, 24-25, 28, 32-33, 36-37, 48-49, 60-61, 64, and 68-69 were indicated as containing allowable subject matter. Applicant thanks the Examiner for this indication of allowable subject matter. Claims 4, 7, 11-12, 24-25, 28, 32-33, 36-37, 48-49, 60-61, 64, and 68-69 were objected to because they are dependent from rejected base claims, and claims 48-49 were also rejected under 35 U.S.C. 112, second paragraph, as discussed below. It is respectfully submitted that the claims upon which claims 4, 7, 11-12, 24-25, 28, 32-33, 36-37, 48-49, 60-61, 64, and 68-69 depend should be allowed, and that, therefore, this objection to claims 4, 7, 11-12, 24-25, 28, 32-33, 36-37, 48-49, 60-61, 64, and 68-69 should be withdrawn. The indefiniteness rejection of claims 48-49 is discussed below.

Claims 1, 6, 13, and 34-37 were objected to because they use some form of the verb “to configure.” The Office Action took the position that such language does not create a positive recitation. The Office Action cited an MPEP section that relates to optional language as being the basis for the objection. Applicant respectfully traverses this objection.

The use of the verb “to configure” does not make the associated claim language optional, and is an acceptable way of claiming an invention. Since 1976, more than 200,000 patents have issued that contain the words “configured” or “configuring” in the claims. The use of the verb “to configure,” therefore, can be seen to be a widely accepted word for claiming inventions. Furthermore, there is nothing “optional” about configuration, thus the discussion cited by the Office Action in MPEP 2106 is inapplicable.

Furthermore, Applicant notes that the Examiner’s Supervisor, Doris H. To, has allowed more than 50 patents whose claims include the recitation of “configured.” Accordingly, Applicant respectfully submits that it should be well known to the Examiner that the use of the term “configured” is an acceptable, non-optional way of claiming inventions.

Likewise, Applicant notes that the Examiner, as an Assistant Examiner, has allowed more than 10 patents whose claims include the recitation of “configured.” Accordingly, Applicant respectfully submits that the Examiner’s objection to the use of the verb “to configure” to claim the invention is not reasonable. Therefore, Applicant respectfully requests that this objection be withdrawn.

Claims 46-57 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. The Office Action took the position that a plurality of mean-plus-function elements were recited, but that it was not clear from the specification and drawings what structure corresponded to each of the means. Applicant respectfully traverses this rejection and requests clarification.

Applicant respectfully notes that claims 46-57 are parallel claims to the structurally defined claims 34-45. Accordingly, Applicant respectfully submits that, at a minimum, one of ordinary skill in the art would refer to claims 34-45 to locate an example of corresponding structure. Applicant also notes that, as MPEP 2182 explains, “If the specification defines what is meant by the limitation for the purposes of the claimed invention, the examiner should interpret the limitation as having that meaning. If no definition is provided, some judgment must be exercised in determining the scope of the limitation.”

Indeed, the Examiner appears to have exercised such judgment in determining the scope of the claims, for the Examiner, at page 6, last four lines, and page 7, first ten lines, provides a rejection that indicates that the Examiner has recognized that claims 34-45 are parallel structural claims to means-plus-function claims 46-57. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

However, in case there are any particular means-plus-function limitations for which the corresponding structural feature is still unclear, even upon consideration of a corresponding parallel claim, Applicant respectfully requests that the Office Action particular identify the limitations that appear to remain indefinite.

Claims 1-2, 6, 8-10, 58-59, 63, and 65-67 were again rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,665,278 of Grayson ("Grayson"). Applicant respectfully traverses this rejection.

Claim 1, upon which claims 2-12 depend, is directed to a method including sending a first request message having a first selected scope. The method also includes analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message. The method further includes sending a second request message having a second selected scope when a confirm

message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope. The method is configured to provide resource discovery.

Claim 58, upon which claims 59-69 depend, is directed to a computer program product encoding a computer program of instructions for causing a processor to locate a resource for establishing a connection thereto according to a method. The method includes sending a first request message having a first selected scope. The method also includes analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message. The method further includes sending a second request message having a second selected scope when a confirm message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope.

Applicant respectfully submits that Grayson fails to disclose or suggest all of the elements of any of the presently pending claims.

Grayson generally relates to wireless networked message routing. As Grayson explains at column 2, lines 3-27, Grayson's wireless communication network includes a plurality of nodes clustered for the exchange of data and control message packets. Each node has its own address. Each node also knows the address of each other node in the

system. If a node is trying to reach a particular node and fails, the node routes the message by a second node. Accordingly, Grayson does not address discovering resources. Indeed, the only discovery that Grayson could be said to make is the discovery of blockages.

Claim 1 recites a method “configured to provide resource discovery” that comprises “analyzing whether a confirm message is received from a discovered resource.” Similarly, claim 58 recites “a computer program ... for causing a processor to locate a resource” and “analyzing whether a confirm message is received from a discovered resource.” Applicant respectfully submits that Grayson does not disclose or suggest at least these features of the claims.

The Office Action asserted that these features are disclosed by Figures 10 and 13 of Grayson together with column 7, lines 8-9 and column 8, lines 39-42. Applicant respectfully disagrees. In those cited passages, Grayson is discussing attempting to send a message to node B (Figure 10) or TN (Figure 13 and column 8, lines 39-42). With regard to node B, the node is a known node with a known address. There is no “discovery” that goes on in locating node B. Accordingly, node B does not correspond to “a discovered resource” as recited in claims 1 and 58, nor is the process of routing and re-routing a message to node B a method “configured to provide resource discovery” as recited in claim 1.

Likewise TN, as described at column 8, lines 38-38, is a “non-existent or non-functional target.” Accordingly, TN does not correspond to “a discovered resource” as recited in claims 1 and 58, nor is the process of routing and re-routing a message to TN a “method of providing resource discovery” as recited in claim 1.

Accordingly, Applicant respectfully submits that Grayson does not disclose or suggest all of the elements of claims 1 and 58, or of claims 2, 6, 8-10, 59, 63, and 65-67 that depend from them.

Applicant presented a position along the lines discussed above in a response that was filed September 27, 2006 (“the Previous Response”). The present Office Action responded to that line of arguments by taking the position that Grayson does disclose those features, because Grayson discloses “the node is discovered [sic] being existent or functional” according to the Office Action, at page 8. Applicant respectfully disagrees with the Office Action’s position.

The reasons that Applicant disagrees with the Office Action’s position are that it does not address the claim recitation, and that it is factually inaccurate. Grayson is directed to dynamic routing, not discovery of resources. Whether or not Grayson discovers various characteristics of known resources (such as continued existence or

functionality) is not relevant to the claim recitations, because the claim recitations recite discovery of resources, not of characteristics about the resources.

Moreover, the Office Action's characterization of Grayson as disclosing "the node is discovered [sic] being existent or functional" is factually inaccurate. Grayson does not disclose a way to discover whether a node is existent or functional. Grayson assumes that the known nodes are existent and functional, and continues in that assumption, even if the node is not immediately reachable. That is why, at column 8, lines 10-19, Grayson says that "if the target node ... does not exist ... this may not be immediately apparent to the originating node ... and the originating node will assume that the target node exists...." Indeed, Grayson goes on to explain that because the originating node does not know that the target node does not exist, it may produce an endless succession of packet re-routings.

Accordingly, at column 8, lines 20-34, Grayson proposes placing a hop limit on the number of times a message packet may be re-routed. However, nowhere and never does Grayson actually inform the originating node that known resource, *i.e.* the node, was not functional or not existent. It merely terminates the attempt to reach the node after a certain number of hops. Accordingly, nothing is discovered about the node, but rather, as pointed out above, something is discovered about the ability to communicate with the node. That is to say, the only thing that Grayson can fairly be said to discover is blockages.



Indeed, the entire purpose of Grayson is to dynamically route, and thus Grayson is not interested in discovering resources but rather in improving communication between nodes. Therefore, it is unsurprising that Grayson does not discover previously unknown resources, or that Grayson does not actually even discover previously unknown characteristics of known resources. Grayson does not discover resources.

The Office Action's observation that Grayson sometimes confirms that a known node is still existent and functional is not a discovery at all, but simply a confirmation of known and assumed information. Accordingly, Applicant respectfully submits that the Office Action's position lacks merit, and we recommend requesting that the rejection of these claims be withdrawn.

Applicant notes that such further explanations of why the Office Action's response is inadequate to support the rejection were presented in the Previous Response. However, the Office Action did not provide any answer to these arguments. Applicant respectfully notes that the Examiner has a duty to respond to arguments and requests that the problems with the rejection be addressed or the rejection be withdrawn.

MPEP 707.07(f) sets forth the Examiner's obligation to answer all material traversed. Specifically MPEP 707.07(f) states that "the examiner should, if he or she

repeats the rejection, take note of the applicant's argument and answer the substance of it.” It is essential that the Office Action address each of the arguments presented, so that meaningful appellate review is possible. The Office Action, however, did not address all of the arguments. Accordingly, if the rejection is again maintained, Applicant respectfully requests that a response to the arguments be presented in a new Non-Final Office Action.

The Office Action also took the position that the argument above relies on “certain feature of applicant’s invention” and identifies those as “a known address or a known node B” are not recited in the claims. Applicant respectfully submits that the Office Action has misunderstood the argument. Indeed, we agree that “a known address or a known node B” is not recited in the claims. Contrariwise, the claims recite discovery, and discovery is fundamentally opposed to prior knowledge.

That discovery is fundamentally opposed to prior knowledge can easily be shown by way of example. It would, for example, be absurd to speak of Benjamin Franklin discovering that lightning is made of electricity with his famous key-tied-to-a-kite-string experiment, if he already knew that electricity was the substance of lightning. Unlike Benjamin Franklin, Grayson already knows the resources in the system, and thus Grayson discovers nothing (except, as discussed above, communication blockages).

Specifically, Grayson already knows the resources in the network (and even knows their addresses), and does not discovery any resources whatsoever. In fact, even when a resource has ceased to exist or has become non-functional, Grayson does not discover this fact. Thus, Applicant respectfully submits that the Office Action's admission that "a known address or a known node B" is not recited in the claims supports the argument for patentability, and Applicant respectfully requests that the rejection be withdrawn for this additional reason.

Applicant notes that, again, these further explanations, regarding why the Office Action's response is inadequate to support the rejection, were presented in the Previous Response. However, the Office Action did not provide any answer to these arguments. Applicant again notes the Examiner's duty under MPEP 707.07(f) to respond to arguments and requests that the problems with the rejection be addressed or the rejection be withdrawn, and that if the rejection is maintained the rejection be presented as a new non-final rejection.

Claims 5, 22-23, 26-27, 29-31, 34-35, 38-47, 50-57, and 62 were again rejected under 35 U.S.C. 103(a) as being obvious over Grayson in view of no other references. The Office Action asserted that although Grayson does not "explicitly teach that the originate node transmit the packet to a plurality of target nodes (a multicast group)" that this would have been obvious because Grayson teaches "that the originate node

broadcasts a packet to a plurality of nodes.” Applicant respectfully traverses this rejection.

Claims 5 and 62 depend respectively from, and further limit, claims 1 and 58. At least some of the deficiencies of Grayson with respect to claim 1 are discussed above. Nothing in the rejection under 35 U.S.C. 103(a) addresses the above-identified deficiencies, and, therefore, it is clear that claims 5 and 62 are both novel and non-obviousness over Grayson.

Claim 22, upon which claims 23-33 depend, is directed to a article of manufacture comprising a computer readable medium having instructions for causing a processor to locate a resource for establishing a connection thereto according to a method. The method includes sending a first request message having a first selected scope. The method also includes analyzing whether a confirm message is received from a discovered resource within the first selected scope in response to the first request message. The method further includes sending a second request message having a second selected scope when a confirm message is not received from a discovered resource in response to the first request message, the second selected scope being greater than the first selected scope. The article of manufacture is configured to provide resource discovery using multicast scope selection.

Claim 34, upon which claims 35-45 depend, is directed to a discoverer including a discovery unit and an application. The application is operatively coupled to the discovery unit, and is configured to send a notification to the discovery unit to locate an endpoint application. The discovery unit is configured to send a first request message having a first selected scope to a multicast group, analyze whether a desired confirm message is received from an endpoint application in response to the first request message, and send a second request message having a second selected scope when a desired confirm message is not received from the endpoint application in response to the first request message. The second selected scope is greater than the first selected scope.

Claim 46, upon which claims 47-57 depend, is directed to a discoverer including a discovery means for providing resource discovery. The discoverer also includes a notification means operatively coupled to the discovery means, for sending a notification to the discovery means to locate an endpoint application. The discovery means includes means for sending a first request message having a first selected scope to a multicast group. The discovery means also includes means for analyzing whether a desired confirm message is received from an endpoint application in response to the first request message. The discovery means further includes means for sending a second request message having a second selected scope when a desired confirm message is not received from the endpoint application in response to the first request message. The second selected scope is greater than the first selected scope.

Applicant respectfully submits that Grayson fails to disclose, suggest, or otherwise render obvious all of the elements of any of the presently pending claims.

Grayson is discussed above. The claims recite “a discovered resource” (claims 1, 22, and 58), “a discovery unit” (claim 34), and “a discovery means” (claim 46). As explained above, Grayson does not discover (or even try to discover) any resources. Accordingly, Grayson also does not have a “discovery unit” or “discovery means.” Applicant respectfully submits that Grayson does not disclose or suggest at least these features of the claims.

The Office Action suggested that it would have been obvious “to transmit a packet to a group of target nodes” “by copying the packet and transmitting the packet to each node of the group to multicast the packet.” Applicant respectfully disagrees. Grayson discusses that a broadcast address can be used to send a packet to all nodes. However, Grayson’s disclosure of simple broadcast does not render “multicast” obvious. In any case, whether Grayson renders the multicast feature obvious is moot, because Grayson does not disclose the resource discovery features described above.

Instead, as explained at column 5, line 64, to column 6, line 49, in Grayson a newly “inducted” device performs an enrollment routine in which the device sends a

message as shown in Figure 4 of Grayson, containing enrollment and features information. This features information is then locally stored by each node in a locally held node table, as shown in Figure 8 of Grayson. The node table holds the node addresses of the other nodes and feature information about features that the other nodes have that might be of interest to the node. Grayson also addresses how to prevent nodes with useful features from falling off the table because nodes with a greater number of useful features are added to the table.

Accordingly, in Grayson, there is no disclosure or suggestion of the features of the other nodes being known to each node, and there being no need for a node to perform discovery as to the resources of its neighbor nodes. Therefore, it would not have been obvious to modify Grayson to include resource discovery generally, or the particular recitations identified above.

Arguments such as those discussed above with regard to claims 5, 23, 26-27, 29-31, 35, 38-45, 47, 50-57, and 62 as presented in the Previous Response were ignored by the Office Action. Indeed, the Office Action, at Page 8, falsely asserted that “Applicant does not suggest any additional arguments further to those of claims 1 and 58.” Applicant respectfully points out the arguments presented in the preceding paragraphs, points out they they are further arguments. Applicant, therefore, respectfully insists that

the Office Action recognize the arguments and answer the substance of the arguments or withdraw the rejection.

Thus, Applicant respectfully submits that claims 1, 22, 34, 46, and 62, as well as claims 5, 23, 26-27, 29-31, 35, 38-45, 47, 50-57, and 62 that respectively depend from them are novel and non-obvious over Grayson.


For the reasons explained above, it is respectfully submitted that each of claims 1-69 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-69 be allowed, and that this application be passed to issue.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.



In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
\_\_\_\_\_  
Peter Flanagan  
Registration No. 58,178

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

PCF:kzw